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SOME ECONOMIC FACTS AND CONCLUSIONS ABOUT SOUTH AMERICA

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In preparation for the course now being given by the Graduate School of Business Administration of Harvard University upon the Economic Resources and Commercial Organization of Latin America I was sent to South America in October, 1910, to travel, to observe, and to interview. The object was to see the people; to see natural economic conditions such as climate, resources, products; and human economic conditions such as transportation facilities, industrial development, currency, banking; to see the goods that were being handled—for example, through how many middlemen between the countries, how many within the country; and to see changes that might be evident as taking place in the organization of the foreign and domestic trade.

Evidently this was a considerable subject or group of subjects. Of necessity in the time allowed it could be covered only superficially. Avowedly it was so planned. Only the main points could be touched upon. An economic perspective of South America that was approximately correct was sought for. With the frame work of the course constructed on general lines that were according to fact, it was felt that many additional details could be supplied from the material continually increasing at home, from current reports and from correspondence.

The trip lasted a trifle over a year, and amounted to some 26,000 miles of travel in every country in South America, except Venezuela and the Guianas. The Andes were crossed six times in the countries of Colombia, Ecuador, Peru, Bolivia, and Chile. The River Plate was ascended as far as Asuncion, Paraguay. In Brazil, the coffee country, the coast cities and the mouth of the Amazon were covered.

The course on Latin America in the Graduate School of Business Administration of Harvard University, of which much the largest part is devoted to South America, has now been given for five years. Each year has witnessed changes and additions with the increase of reliable information about South America. This sixth year will witness further changes in the course, but no reason has been seen yet for changing certain fundamental economic concepts about South America.

In the time allotted for this paper I should like to give you what seem to me to be important economic facts about South America and to present some economic conclusions which can be fairly arrived at in the light of present knowledge. These facts may be classified as physical facts, facts about the population, facts about trade.

PHYSICAL FACTS

First I should like to call your attention to certain physical features of South America which I believe are fundamental to a correct estimate of its possibilities.

South America is a century older historically than North America. The Spanish and Portuguese had permanent settlements in South America before Captain John Smith was born, yet South America today, with an area equal to that of the United States and Canada combined, has a population scarcely one-half that of the United States alone. Why? There are, of course, weighty reasons, political and racial, and the important economic reason of geographic remoteness. But these are not all the reasons.

One of the most eminent authorities upon the geography of South America has said that Nature must have been in her kindest mood when she created North America, but not when she created South America. It was not until after my return from South America that I read this sentence and was struck by its pregnancy.

Climate

The map of the western hemisphere shows at once an important physical fact about South America. Both continents have a broad bulge in the north, tapering to a point in the south, *but* North America bulges in the temperate zone while South America bulges in the tropics. In other words, four-fifths of South America is in the tropics. Now the tropics do not necessarily connote snakes and jungles and disease. After seven months' residence in the tropical regions of the north, west, and east coasts of South America I can testify to the altitude and trade winds providing many habitable and even delightful spots within those tropics in Colombia, Ecuador, Peru, Northern Chile, Paraguay, and Brazil. Modern medical science and skill is removing the obstacle of tropical disease, but the fact still remains that there are tremendous areas in South America east of the Andes and north of the Pilcomayo where there is an average temperature of more than 70° F. and an average rainfall of more than 100 inches (40 is considerable)—regions where the tropical forest and undergrowth have to be combated continually with steel and acid spray.

Such conditions of climate and conditions that accompany such climate have not so far been hospitable for the Caucasian stock which up to this time has shown itself, in material affairs at least, the most progressive racial element of the globe. And it is significant to note in this connection that the country in South America which is most progressive and whose trade is over one third of that of the entire continent, although having scarcely a seventh of the population or area, is that country occupying the most of that narrow, tapering end of South America extending into the temperate zone—namely Argentina, where conditions are most like those of North America. Nature has not been kindly to South America on the whole, from our point of view, in the climate she has given her.

Transportation Conditions

In her gift of transportation conditions Nature has been much more kindly to North America than to South America. In North America the mountains on the whole have been low lying, and comparatively easy of passage, or, where high, have been reduced by long gently sloping plateaus, as from western Nebraska to the Rockies. South America, on the other hand, has a mountain system which hardly with design could have been made more of an obstacle to cheap transportation from coast to coast, or from any distance in the interior of the west coast to its ports. There is one stretch of the Andes that for over thirty degrees of latitude, or 2000 miles, has not a pass under 12,000 feet altitude, except that of the trans-Andean between Argentine and Chile, where a long tunnel has reduced the pass to under 11,000 feet altitude; but this railroad has fifteen miles of cog-rail, and is not a freight road but a mail, express and passenger road.

These western ranges rise abruptly from the coast or near the coast, with practically no alleviating slopes to lengthen out and lessen the steep climbs to the divide. Cog-roads, switch-backs, 3 and 4 per cent grades, are the rule on the west coast, with the exception of southern Chile. One range such as the Andes makes an ample transportation problem, but throughout most of their length they are a double range, and in Colombia they are triple, almost a quadruple range. These parallel ranges are such as frequently to double and triple the through transportation problem, almost as much as if one range were piled upon the other.

The Andes are the greatest single fact in South America. Not only do they form the transportation barrier that they do, but they have much to do with the climatic conditions. They are responsible for the west coast throughout Peru, and the northern third of Chile, some 1500 miles in extent, being gray and barren and dependent upon irrigation for the vegetation it has. The Andes, again, as they turn back the humid winds from their cold sides, are responsible for

much of the country on their eastern slopes and beyond, being drenched with excessive and torrential rains.

Even the much lesser ranges of the east coast have been placed with irritating perversity from an economic standpoint. In Brazil, for example, the mountains, although not averaging over 3000 feet in altitude, are peculiarly abrupt at the very edge of the coast. No railroad, English or Brazilian, has succeeded in getting an economical freight grade over them. As far north as Bahia they form a veritable screen, shutting off the interior and rendering much more difficult the opening up, for example, of the tremendous iron deposits of Minas Geraes. In Argentina again alone, do we find ideal conditions for land transportation corresponding to those of our own prairie states.

It is true that South America is gifted with a wonderful river system. Two of her rivers, the Amazon and the Plate, are greater than our own Mississippi, and navigable for a far greater length because of their slight gradient and the heavy rainfall at their headwaters. There is also a physical possibility of effective canalization to connect the Orinoco, Amazon, and Plate Systems, should such canalization be sufficiently desired. These rivers give access, however, to the tropical basin already noted. That same slight gradient indicates a basin still unsufficiently developed geologically so that a large portion of it is submerged or subject to submergence at times.

Lack of Coal

Perhaps where Nature has been least kindly of all to South America is in denying her adequate deposits of coal. Although coal is mined at various points it is of inferior quality, and South America today is essentially a coal importing country. Chile, the greatest coal producing country of South America, imports half of its supply from the British Isles and Australia. Cardiff coal, for the Bolivian railroads, is taken up over the Andes, reaching a cost of some \$40 per ton at its final destination. English coal at La Guaira, Venezuela, one of the nearest ports of South America, costs \$12 per ton on the dock. Coal has to be brought

over the seas for the iron deposits of Brazil. This, together with the coastal grades already referred to, have neutralized to a large degree the exceeding richness of that iron ore. Norfolk coal, from the United States, is beginning to enter Brazil and the Plate. South American railroads have spent thousands of dollars prospecting for coal of good quality and commercially accessible. Up to the present time their efforts have not been successful.

Water power there is on the west coast and especially in Brazil. The cities of Lima, Peru, and La Paz, Bolivia, Rio Janeiro, and São Paulo, Brazil, have their public service corporations supplied with hydro-electric power, and the end of the railroad descending into La Paz has been electrified. Just how much water power there is on the west coast, how constant it is, just how harmoniously it can be operated in competition with the use of water for irrigation, which is always a superior use, is decidedly conjectural.

In Brazil, in the drainage basin of the Paraná, there are undoubtedly hundreds of thousands of horsepower of water power. But the fundamental difficulty in the development and employment of water power is the necessity of a large fixed capital investment at the very beginning. It cannot have the gradual increase in capacity, horsepower by horsepower from ton by ton, as in the case of energy derived from coal. Consequently, a large market for the power from water power is needed at the outset. With few exceptions there are not markets in South America yet for large blocks of power. Petroleum produced in northern Peru and more recently in northern Argentina is increasing, but the position of importance of coal and petroleum in the import statistics of South American countries still remains most significant.

My strokes have been few and broad. Many exceptions in detail could be cited—Argentina has already been mentioned. In general, the strokes have been accurate, in portraying South America as not nearly the country naturally for economic development that North America is. In climate, in topography, in power supply, Nature has dealt much more kindly by us than by our southern sister.

FACTS ABOUT THE POPULATION

Let us now turn, and even more briefly, to a feature which happily is much more dynamic, much more subject to change than those physical features which we have just considered. I refer to the population. As you know, the population of South America is much mixed, being of three distinct racial stocks—the native stock, which here it will suffice to call Indians, although of many different strains and qualities; the European, originally from Spain and Portugal, and more recently from those same countries again, and from Italy and Germany as well; the negro, brought in by the Spanish and Portuguese as slaves, but now long since freed and mixing with the other racial stocks.

The proportions in which these stocks make up the population of the various countries vary greatly. In general, it will be found that in tropical, hot and humid lowlands (*tierras calientes*), the negro strain is prominent, and as the higher lands are reached the Indian and European strains increase, and in the temperate regions, to the south, the European decidedly predominates. In the northern part of the continent, Colombia, Venezuela, Ecuador, and northern Brazil, the mulatto (black and white), mestizo (red and white), and zambo (red and black), are much in evidence. In Peru and Bolivia probably 50 per cent of the population is pure Indian, and a large portion of the balance mestizo. In Argentina it is probable that over four-fifths, and very likely nine-tenths, are of pure European stock.

Much of the Indian population of South America is of a type far different from our own. Of a considerable degree of civilization, when the Spanish came, and of an industrious and faithful nature capable of development, the Indians of Peru, for example, have been called Peru's greatest single asset. The railroads, mines, and other industries could not be at present operated without them. In Bolivia and Chile, Indians of a sterner fibre were encountered by the Spanish, which has resulted in a virile mestizo population.

With this as a preliminary statement regarding the population in general it is possible to make some generalizations.

First, in regard to the social stratification. The observant traveler is struck by the lack of a middle class. There is an upper stratum of population amounting to approximately some 2 or 3 per cent of cultured people most delightful to meet, who have traveled much abroad and have usually been educated abroad, and then there is an abrupt descent to a class that is, on the whole, and according to our standards, backward and illiterate. This upper stratum of population is usually concentrated in the cities, and especially in the capitals, so that the cities and capitals of South America are by no means fair criteria of the countries of South America. For example, on the west coast the cities of Lima, La Paz, and Santiago would give one who had sojourned only in them an incorrect idea of the stage of development of those countries. There are shop windows and streets in Lima that will compare with those of any city in Europe or in the United States. The electric traction service between Lima and its port, Callao, is most modern and adequate. It is not until one has been into the back country of Peru and seen the high proportion of Indian population and the conditions in which that population is living that one can judge the development of Peru more fairly.

This state of the population has been reflected in political conditions. Governments have not been representative as we understand that word. This does not necessarily mean that the rules of these unrepresentative rulers have always been beneficial. In Chile it has long been said that a hundred families were the government, but, on the whole, Chile has progressed under this oligarchical sway. Though it may be true that through the government ownership of the railroads they have made themselves low freight rates, it is also true that for the rest of the population they have established low passenger rates, for example, of about 1 cent a mile. Another country could be cited by name, the government of which, it is pretty well known, is under the domination of one man, yet he is an able man, and under him the country is forging ahead. But, happily, these conditions are steadily changing for the better, as the character of the popula-

tion changes. In Argentina the rise of a middle class has been reflected in improvements in the laws and execution of the laws within the last two years. A large proportion of the population there has laid its economic foundation and is now demanding and exercising its proper share in the government. This same holds true, in some degree, in the countries of Chile, Uruguay, southern Brazil, and Peru—once more it will be noticed in that section of South America that lies in the temperate zone, or in a temperate climate.

Another singular characteristic of the population of South America is that despite its being a continent that is agricultural and extractive, and not industrial, the population is yet remarkably concentrated. For example, 20 per cent of the population of Argentina is in the city of Buenos Aires alone, and four other cities of Argentina contain 5 per cent more of the entire population, and yet Argentina is essentially a grazing and agricultural country. One-third of the population of Uruguay is in the city of Montivideo, and Uruguay is essentially a grazing and agricultural country. In Paraguay, 12 per cent of the population is in the city of Asuncion. In Chile, primarily a mining and agricultural country, five cities have over 20 per cent of the population. In the other countries of South America the concentration of population is less marked, but still considerably more than would be normally expected of an extractive and agricultural country. In the United States, much more of an industrial nation, but 26 per cent of the population is in cities of 50,000 and over. Furthermore, if a map of South America were constructed to show the location of the population, it would be found to be concentrated all around the border of the continent. If you can imagine a triangular shaped bowl, the location of the population would be represented by dots all around the rim. The great central basin is practically uninhabited. The cities of Iquitos and Manaus, upon the Amazon, might seem an exception, but they are really outposts for the collection of rubber.

It is no disrespect to any South American country, whom in some of their ways we could copy with profit, to say that

South America, as at present inhabited, is but a shell. There is no back country. One is struck by this in riding out from any large center of population. The inhabited area drops off suddenly unto the uninhabited.

FACTS ABOUT TRADE

In the light of the preceding physical facts and facts about the population of South America we now approach some surprising facts about its trade. South America, with about forty-eight or fifty millions of inhabitants, or about one-fifteenth that of Asia, has a much greater foreign trade than Asia. This is due to two reasons. In the first place, South America has certain products which the world wants very much, and in the supplying of which it has a monopoly to a greater or less degree. The most important products are coffee, rubber, nitrate, cocoa. And in the Plate region it has great natural advantages for producing cereals and meat, which the growing population of the world demands more and more. And in the second place, South America, in its present stage of development, does not provide for itself many of the products that it consumes, but exchanges its own products for them, which extends to the degree even of importing many food stuffs.

The total trade of South America amounts to about \$1,800,000,000, of which roughly \$950,000,000, or 53 per cent are exports, and \$850,000,000, or 47 per cent imports. In this foreign trade the following countries are interested: Great Britain leads with 27 per cent to 28 per cent; Germany is second with 18 per cent to 17 per cent; United States is third, and very close to second, with 17 per cent to 18 per cent (depending on its imports of coffee as to whether it will exceed Germany or not by one per cent or so); and France is fourth with 8 per cent to 9 per cent. These trade figures are for the continent as a whole. If we divide the continent into its natural geographic groups of the north coast, west coast, River Plate, and Brazil, we find the United States leading in the north coast trade, apparently because, of its geographic proximity, for as we descend to Ecua-

dor we find the United Kingdom rivaling it for first place, and in Peru the United States falls to second place, and in Chile and Argentina to third. Its leading position in Brazil is due to its large imports of rubber and coffee, rather than to its exports to Brazil. In Argentina, just the reverse is encountered, she buying much more from us than we from her, which constitutes something of a return cargo problem for our ships from her ports. Despite the idea that seems to be somewhat current, that the United States is not getting its fair share of South American trade, when one considers the heavy capital investment of other countries, and especially of the United Kingdom, and also considers the large foreign colonies and immigration, especially from Germany and Italy, and compares these facts with the United States capital invested and United States population resident in South America, one is inclined to wonder that our trade is as extensive as it is. In the last ten years our trade has increased greatly, but our percentage of the total trade has changed but little, although it has increased somewhat. That is to say, the proportional importance of our trade to South America, as compared with that of the United Kingdom or Germany or France, has changed but little. But, on the other hand, the importance of South America's trade to us has increased some fifty per cent. For example, taking three year averages, the importance of South America in our total foreign trade has risen from 6 per cent plus, in the last decade, to 9 per cent plus, and this in the face of our rapidly expanding foreign trade to all parts of the world. The importance, similarly, of South American trade to the United Kingdom is about 9 per cent, to Germany 8 per cent, and to France 6 per cent. And we are now seeking South American trade in earnest as part of our general producing pressure for a foreign outlet. Old traditional complaints of our poor packing and inferior salesmen are now nearly obsolete. Our credits are less arbitrary and the further extension of credit beyond the present general American policy of ninety days sight draft would be of extremely doubtful advisability. On the contrary, our example seems to be reacting somewhat in shortening credits in general. Our

advertising propaganda, in the language of the country, is found in most remote sections, illustrated in a way particularly pleasing to the people. German salesmen say that our advertising is far superior to theirs in South America. Our diplomatic and consular force in South America is, on the whole, without much doubt the best and is so regarded by many of the foreign colonies there. Cuba and Mexico have served as training schools for our salesmen both in the language and customs of the country. South American duties have been distinctly favorable to our products, since on machinery of all sorts, agricultural, mining, railroad, and auxiliary supplies, the tariff has either been free, or nominal. In such commodities as these lies one of our chief advantages in trade.

To increase our trade with South America it has been urged that there be established an American line of freight steamers. It has been said that thus only could proper service be supplied, and that the flag in itself would increase our commercial prestige. This is not the place for a lengthy argument upon shipping; all that can be said is that constant shippers to South America do not complain of inadequate service or of unreasonable rates. Again, the sentiment of the flag does not seem to enter into trade vitally since France, which is perhaps the country most highly regarded in sentiment by the South Americans, is distinctly fourth in trade and scarcely holding its own, although it has a subsidized French shipping line. Ocean freight service is one of the most flexible services in the world. Tramp steamers come from the other side of the world if there be sufficient demand for them. Under present conditions, both economic and legal, there is but little doubt that the United States cannot construct or operate shipping lines so cheaply as Great Britain or Germany. If they perform transportation service adequately for us, and more cheaply, it would seem that we may well continue that arrangement. It is beginning to look, however, as if very shortly we should be able to compete with them in both the construction and navigation of ocean-going boats, without the aid of any subvention.

As to the establishment of an American bank, it does look as if our trade had reached the point where an institution, owned and directed by Americans, to furnish exchange and credit information and to give other financial assistance to Americans, is warranted. Great Britain and Germany each have several banks in South America, and France, Italy, and Spain have each a bank there. So far as can be learned all these banks have paid well. It also appears as if the argument for greater prestige applied more forcibly to the establishment of a bank than to the subsidizing of a shipping line. Those trading with South America, however, say that the foreign banks, through their New York agencies, give adequate and reasonable banking service. One of our greatest banks has been looking into the subject carefully but what action it is to take toward establishing an American bank in South America is not yet publicly known.

It has seemed to me as if a much more influential step toward building up our trade in South America would be the establishment of an American department store in the city of Buenos Aires, at least, and probably better in the cities also of Rio Janeiro, Santiago, and Lima. In my own experience with retail stores in South America I was impressed by the lack of display given to American goods, even in articles in which our ascendancy was acknowledged, such as firearms and some kinds of hardware. This, I am inclined to think, is chiefly due to the stores being affiliated with other nationalities. The leading department store in South America is in Buenos Aires, and is owned and operated by French capital. The people of Buenos Aires are highly delighted with it, and it is an excellent store, but it does not compare with department stores in the United States of the same grade. It seems to me that an association of American exporters, actual and prospective, might well consider organizing a department store company for the purpose of displaying American goods in South America, and eventually for profit. Such a department store would display the goods in which we have an advantage and import other goods just the same as our department stores in this country import goods from Europe and elsewhere for their trade.

SOME CONCLUSIONS

Now, finally, if I may be permitted, I should like to draw some conclusions as to the economic and consequent trade possibilities of South America. The rôle of prophet has never been a safe one, nevertheless I am going to venture a few statements about the continent with the main basis of fact for my deductions.

As has been stated before, South America divides naturally into the geographic groups of the north coast, the Guianas, Venezuela, and Colombia; the west coast, Ecuador, Peru, Bolivia, and Chile; and the east coast, which subdivides into the River Plate (comprehending Uruguay, Paraguay, Argentina), and Brazil.

Taking first the north coast—in Colombia we have perhaps the most difficult transportation problem in any portion of South America because not only do we have the greatest number of parallel ranges of mountains therein, already referred to, but also the main arteries of water transportation, namely the Magdalena and the Cauca, are both obstructed, the Magdalena by a bar at its mouth, and the Cauca by unnavigable falls near its point of discharge into the Magdalena. This necessitates at least two rail transshipments of goods in the progress of their transportation up the Magdalena River to the most important cities of Colombia—Bogota and Medellin.

On the west coast, in Peru, we have a country which, although its total area is over 600,000 square miles, one-fifth of that of the United States, yet it is not a country so economically attractive as these figures would indicate. There again the parallel ranges of the Andes have shut off the interior from the coast and affected the climate radically. The coastal strip of Peru averages from 25 to 30 miles only in width, and is absolutely arid and barren, irrigation being required for any vegetable production. An American company, already with large investments in Peru, has studied the irrigation possibilities of this strip. It estimates that with 1,500,000 acres already under irrigation it is possible to increase that amount of irrigable area 1,000,000 acres, or to a total of 2,500,000 acres.

The intermountain region of Peru is between these two ranges of the Andes. Much of it is so high as to limit its agricultural productivity. Furthermore, its valleys are long and narrow, one of which, for example, is 300 miles long, by about one mile in width, presenting a most difficult transportation problem. From present knowledge it cannot be seen how this intermountain region can ever support more than local needs. Finally, there is a third and much greater portion of Peru, to the west of the Andes, the *Montaña*. Little is known about it except that it is a tropical forest with decidedly excessive rainfall, giving high humidity. By far its chief commercial product today is rubber. The position of wild rubber in the world's market is being more and more seriously threatened by the plantation rubber from the East—Ceylon and the Malayan Straits. Present figures seem to indicate clearly that the ordinary grades of rubber can be put on the market by the plantation growers of the East more cheaply than the wild rubber can be secured in Peru and Brazil.

Peru, at present, has a population of 4,000,000 (no one knows exactly, but this is probably the best estimate). Its present irrigated area is 1,500,000 acres, which can possibly be increased two-thirds. Peru has mineral possibilities (it already has one of the greatest copper mines of the world), but mineral production alone has never been the basis of great population. Take, for example, our western states. It was not until they became agricultural, through the employment of irrigation, that the population increased.

Peru has a favorable position, geographically, for trade with the other countries of the west coast, and its commerce with Chile and Ecuador is steadily increasing. This geographic advantage might aid its industrial development, but from the character of the population I should much sooner expect this development in Chile than in Peru. Furthermore, when one remembers how the products of our own country and Europe are being carried around the world, and over tariff barriers, one need not expect a decided industrial development, to the extent of competing in foreign trade, in either of these countries in the immediate future.

Without attaching any special significance to the figure itself, but merely to give you some approximate idea, I think now that I am an optimistic prophet for Peru to hazard the estimate of its present population of 4,000,000 sometime increasing to 10,000,000.

In Chile, which has almost twice the trade of all the other countries of the west coast put together, we have a country of some 3000 miles in length, averaging only 90 miles in width, and half of which width, nearly, is occupied by mountains. The upper third of Chile is as barren and arid as the west coast of Peru. The real heart of Chile is in the central valley, south of Santiago, which has a total area of only about 18,000 square miles. In this upper third of Chile, as barren as it is, has lain the greatest source of its revenue and prosperity—namely, the deposits of nitrate, which have been the basis of the saltpeter supply for the use of that article in a score of manufactured products the world over. This nitrate is now in danger of competition from artificial nitrate to a commercial degree. It is already being produced in experimental quantities.

Chile has today barely 3,000,000 population. Its total population has increased but little, although its cities have increased somewhat. The copper possibilities of Chile have been increased by the construction of the Longitudinal Rail Road to the north, lessening the cost of transportation. The 18,000 square miles of cultivated land, the nitrate beds—threatened with possible competition—the copper mines, a greater initiative on the part of the population than that of the other countries of the west coast neutralized somewhat by greater geographic remoteness, constitute the fundamental basis of Chile's future, as at present seen. If Chile's 3,000,000 of population increase to 6,000,000 Chile is to be congratulated.

Bolivia, the greatest mineral country in South America, has a transportation problem on every side. The haul from the Pacific coast, though short, is over passes of 12,000 feet altitude. A third of the area of Bolivia is from 10,000 to 12,000 feet altitude. In the east, it has much the same tropical problem as Peru, and a long haul, although much

easier, by water, to the Atlantic. Bolivia's present population is 2,000,000.

The economic disadvantages of these aforementioned groups are reflected, of course, in the trade figures. For example, the total trade of the north coast is only a trifle over 4 per cent of that of the total trade of the continent, and the total trade of the west coast is 20 per cent of the total trade of the continent, of which Chile, with its nitrate, has 13.5 per cent.

Now it is the west coast of South America that will be affected by the Panama Canal. But for reasons of its geographic relations to Europe and to the United States, and the routes of trade, and expense of tolls, it is extremely doubtful if the west coast, south of Valparaiso, will be affected in any considerable direct way by the Panama Canal. Possibly a present population of 10,000,000 on the west coast, all located north of the agricultural section of Chile, will be affected by the Canal.

Coming to the east coast a vastly different situation presents itself. In Argentina we have easily the country of greatest possibilities in South America. It already supplies over 36 per cent of the foreign trade of South America, although having but about 15 per cent of the area and 14.5 per cent of the population. Argentina has the products which the world needs, and must have increasingly as population increases—namely food stuffs. We are practically ceasing already to export them. Argentina has just begun making meat shipments to us. Land values are steadily rising in the Plate region. But even in Argentina there are facts to be considered.

In Patagonia, south of the Rio Negro, the productive quality of the land as evidenced in the support of sheep, is one to six, when compared with the land of the province of Buenos Aires, which is certainly one of the richest, if not the richest area of land of the same extent in the world. In the central part of Argentina the question of insufficient rainfall is serious. At the western boundary of Argentina the rainfall diminishes to 4 inches, but there irrigation is possible, and is in effect. In the north of Argentina there

is much saline and alkaline land and swamp land. The amount of fertile land in Argentina is not limitless, and is probably overestimated. The possibilities of dry farming are not exhausted, by any means, but it can be said that the Argentine government regards as a serious problem the great areas of semi-arid land between San Luis and Mendoza. A survey of the physical resources of Argentina recently completed estimates that two-fifths of its area is arable land. Once more, still mindful of the precarious footing of a prophet, it can be ventured that an estimate of 30,000,000 as a possibility for the present 7,000,000 of population of Argentina need not be regarded as pessimistic.

In Brazil, a country whose area is nearly equal to our own excluding Alaska, we have much more of an unknown quantity. Transportation conditions and labor conditions in Brazil are indeed serious. The labor situation it is being sought to remedy by immigration, and by industrial education, and general bettering of conditions. No one really knows much about Brazil. It has a population at present of about 21,000,000 probably, three times as great as Argentina, but with 5 per cent less trade. Ninety per cent of Brazil and over is in the tropics. Its position in trade is due chiefly to its products—rubber, coffee, and cocoa. In coffee its position seems secure, its proportion to the world's supply is steadily increasing and it now furnishes nearly three-fourths of it. In rubber exactly the reverse has taken place—its proportion to the world's supply falling to about one-half at present, and still decreasing, and it is perfectly true to say that Brazilian rubber interests are seriously alarmed over the future of their rubber. Experimentation in plantation rubber is being conducted, and labor and transportation conditions are being bettered in an attempt to hold its position in the world's rubber market.

I should dislike to be considered too conservative about South America. What I have sought is to leave with you two ideas, one general, the other specific. One an economic perspective of South America that I believe to be correct, and the other a concrete suggestion for our South American trade to establish an American department store in at least

one city in South America, and preferably in four cities—as a potent stimulator of trade.

I firmly believe that despite the general natural inferiority of South America to North America, it will progress more in the next fifty years than it has in the last four hundred. Its time has come. Political stability is on the increase all over South America, and public financial responsibility of the southern countries is practically assured. Isolated, small, private capital investment is not yet recommended, however. Large scale, corporate investment is much more advisable. To Americans seeking their fortune it may be said that the men chiefly desired at present are those technically trained in the various branches of engineering—civil, electrical, and mechanical. And in Argentina at least our agriculturists are looked upon most favorably. To the American in general seeking his fortune I am confident that the opportunities are better now, and for some time to come, in the United States and Canada, and that in the long run the comforts of life—what the economist would call “consumer’s surplus”—will be found greater in the United States and Canada.

The English and especially the Germans, it is true, are going to South America, but remember that Germany, in an area no larger than New England, New York, and Pennsylvania, is supporting a population of over 65,000,000, or three times the population that those states are supporting and we consider them crowded. Conditions due to dense population similar to those of Germany prevail in England.

The young American, with a love for travel and adventure, the American with technical training, the American engaged in foreign trade, or seeking to engage in foreign trade, may be advised to go, if he is assured of a definite opening. Other Americans before going may well consider.